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# Psychologists' Training, Attitudes, and Practice Behaviors Regarding Collaboration with Primary Care

## Abstract

Primary care patients frequently present with behavioral health related concerns, but for various reasons often fail to receive effective treatment for these problems. The integration of behavioral health providers, including psychologists, within primary care practice has been receiving an increasing amount of research and policy support as the most appropriate way to address this health care problem. However, behavioral health integration appears to remain uncommon. Although several experts in the field have suggested that the lack of specialized training, professional culture, and attitudes among behavioral health providers has significantly hampered collaboration and integration with primary care, there exists little research to support their claims. This study examined the effects of educational experiences and professional practice on collaborative practices with and attitudes toward primary care. 104 licensed US psychologists were administered a survey constructed by this author based on expert theories and limited past research. Analysis of variance (ANOVA) and *t*-tests were conducted to examine the effects of training experiences, coursework, professional practice setting, and theoretical orientation on positive attitudes toward primary care (PAPC) and integrative practice behaviors (IPB).

Results evidenced no significant difference in attitudes toward collaboration with primary care based on education or professional experiences. However, some differences were found on actual practice behaviors, including those endorsing training and professional experiences in medical settings being more likely to engage in collaborative care with primary care providers and those completing graduate coursework directly related to practice in medical settings more likely to obtain and review their clients' medical records. These findings suggest openness among psychologists to collaborative care with primary care providers but a difficulty engaging in collaborative practices unless having past or current experience within a medical setting. This attitude-behavior disconnect may belie significant external and internal barriers to integrative care that psychologists experience, including infrastructure (physical separation, separate record systems, etc.), financial (collaboration non-billable for private practitioners), and discomfort from lack of experience of interacting professionally with medical providers. Additional research is needed to establish and expand upon these findings and provide further understanding of the professional factors affecting the implementation of interprofessional collaborative and integrated care.

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Psychologists' Training, Attitudes, and Practice Behaviors  
Regarding Collaboration with Primary Care

A THESIS

SUBMITTED TO THE FACULTY

OF

SCHOOL OF PROFESSIONAL PSYCHOLOGY

PACIFIC UNIVERSITY

HILLSBORO, OREGON

BY

LUCAS EBERHARDT DE MASTER

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APPROVED:  
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## **Abstract**

Primary care patients frequently present with behavioral health related concerns, but for various reasons often fail to receive effective treatment for these problems. The integration of behavioral health providers, including psychologists, within primary care practice has been receiving an increasing amount of research and policy support as the most appropriate way to address this health care problem. However, behavioral health integration appears to remain uncommon. Although several experts in the field have suggested that the lack of specialized training, professional culture, and attitudes among behavioral health providers has significantly hampered collaboration and integration with primary care, there exists little research to support their claims. This study examined the effects of educational experiences and professional practice on collaborative practices with and attitudes toward primary care. 104 licensed US psychologists were administered a survey constructed by this author based on expert theories and limited past research. Analysis of variance (ANOVA) and *t*-tests were conducted to examine the effects of training experiences, coursework, professional practice setting, and theoretical orientation on positive attitudes toward primary care (PAPC) and integrative practice behaviors (IPB).

Results evidenced no significant difference in attitudes toward collaboration with primary care based on education or professional experiences. However, some differences were found on actual practice behaviors, including those endorsing training and professional experiences in medical settings being more likely to engage in collaborative care with primary care providers and those completing graduate coursework directly related to practice in medical settings more likely to obtain and review their clients' medical records. These findings suggest openness among psychologists to collaborative care with primary care providers but a difficulty engaging

in collaborative practices unless having past or current experience within a medical setting. This attitude-behavior disconnect may belie significant external and internal barriers to integrative care that psychologists experience, including infrastructure (physical separation, separate record systems, etc.), financial (collaboration non-billable for private practitioners), and discomfort from lack of experience of interacting professionally with medical providers. Additional research is needed to establish and expand upon these findings and provide further understanding of the professional factors affecting the implementation of interprofessional collaborative and integrated care.

*Keywords:* primary care psychology, behavioral health integration, primary care providers, interprofessional collaboration.

## **Introduction**

The majority of clinical psychologists today seem to be relatively estranged from the rest of the US healthcare establishment. This dynamic can be witnessed among those psychologists in individual private practice, free-standing private and state psychiatric hospitals, and scattered community mental health centers. Several studies and numerous anecdotal reports have shown that few psychologists interact consistently with their medical counterparts as they approach the management of their clients' health. Much of the ghetto-izing of behavioral health treatment today can be attributed to the bifurcation of medical and behavioral health reimbursement by health insurance companies and other third party payers. Behavioral health treatment, being generally undervalued relative to medical, has been shunted to the side and allotted fewer resources. Such financial variability has contributed to a clear separation of funding streams and thus isolated methods of healthcare service delivery today.

This inequity and isolation has received significant policy attention in recent years ushering in a new era of mental health parity, health care reform, and healthcare integration. However, there does not appear to be a rush of psychologists to join the integrated healthcare efforts that one might expect as barriers to collaborative efforts begin to fall. Instead, despite potential growth for the discipline and increased continuity of care for their clients, many psychologists seem to be holding back, hanging on to the conventional behavioral health model of solo-provider clinical practice.

Although initially puzzling, psychologists' slow response (or non-response) to the recent shifts in healthcare organization makes sense in light of the patterns in the modern history of healthcare disciplines. Western medicine has established a strictly somatic understanding of pathology and treatment. Psychology in response, has located its area of responsibility and



understanding of human functioning almost solely to matters of the mind. However, in recent decades many within medicine have accepted and subsequently addressed the importance of mental functioning in overall human health. Ever-mounting research supports a biopsychosocial conceptualization and treatment of patient/client health conditions. Yet it appears psychologists, with a few exceptions, have maintained their dualistic conceptions of health and well-being; their rigid categorization of matters of the mind and body evidenced in their academic and clinical isolation.

While physicians and other traditional medical disciplines move steadily, albeit slowly, toward a more integrated conception of health, psychologists seem not to have shown an equivalent shift. The glacial pace with which psychologists' have been moving into mainstream healthcare can be detected across various settings, but few areas in healthcare display such a glaring lack of psychological participation as primary care. Primary care's key position within the healthcare system and its longstanding struggle in effectively managing behavioral health problems make it a prime empirical target in the examination of clinical psychology's adoption of integrated and collaborative models of health.

Healthcare researchers have estimated that 25 to 70% of all primary care office visits have a significant behavioral health component (Kathol, Saravay, Lobo, & Ormel, 2006; Levant, 2005). Given the well-known constraints of time (10-15 minute office visits) and economics (e.g. insurance restrictions) (Robinson & Reiter, 2007) as well as inadequate training and comfort to deliver behavioral care (Head et al., 2008; Richards, Ryan, McCabe, Groom, & Hickie, 2004), it seems unreasonable to expect primary care providers (PCPs) to successfully manage all or even most of their patients' behavioral health problems. Nevertheless, many with behavioral conditions continue to suffer from lack of care, leading to worsening of comorbid health

problems and an increasing economic burden on society as a whole (Kathol et al., 2006; Thomas et al., 2005).

Representatives of various research groups and governmental bodies have called for a more comprehensive approach to primary care health that integrates behavioral health services into medical clinics as a solution to many of the problems plaguing health care in America (Butler et al., 2008; James & O'Donohue, 2009; President's New Freedom Commission on Mental Health, 2003). Yet behavioral integration remains the exception rather than norm (Gray, Brody, & Johnson, 2005). How can this be? Many point to reimbursement constraints by both private and public insurers and the overall fragmentation of the U.S. healthcare system as the foremost barriers to integration efforts (Blount & Miller, 2009; Bluestein & Cubic, 2009; Bray, 1996; Garcia-Shelton, 2006; Kathol et al., 2006). Indeed, financial and organizational factors have long challenged the efforts of healthcare workers and their patients attempting to effectively manage chronic conditions and prevent those that are acute. However, might attitudes and receptivity regarding integrated primary care of these very same clinicians also be hampering greater behavioral integration? Success of integrated models seems unlikely should large numbers of clinicians be resistant to adjusting their current approach toward treatment to incorporate the efforts of other disciplines into the care of their patient.

In this study I seek to develop a better understanding of the attitudes of psychologists, in particular, as they pertain to primary care providers and medical care. Psychologists are potentially the most qualified of healthcare professionals to serve as behavioral health providers (BHPs) in primary care, but if they hold negative attitudes toward standard medical care integrated primary care efforts will likely be undermined. Several prominent researchers in the field of integrated primary care suggest that there may be significant resistance among

psychologists toward practicing collaboratively in primary care settings. I hypothesize that many psychologists do harbor such perspectives and view primary healthcare delivery models as incompatible with effective behavioral care.

Before reviewing the existing research on behavioral health provider attitudes, I will examine the role of primary care in health care and why it might be well suited to address longstanding gaps in behavioral health care delivery. Practice models, instances of implementation, the role of psychologists, and potential barriers to behavioral integration will also be reviewed. Finally, I will present of my findings on psychologists' attitudes and its significance for clinicians pursuing better care for their patients with behavioral concerns.

## **Primary Care**

The most common point of entry for those seeking healthcare services, primary care has long been considered the “front lines” of medicine (Schoen, 2006). Representatives of various disciplines of medicine, such as family practitioners, internists, pediatricians and obstetricians-gynecologists, as well as nurse practitioners, and physician assistants all serve as direct care providers in primary care. PCPs working in these clinics tend to be the first to encounter a patient's developing as well as the fully developed, but untreated, illnesses. And, in addition to the broad array of presenting medical illness, PCPs regularly find themselves on the receiving end of requests for behavioral care as well.

Many if not most primary care office visits include a behavioral component, which often involve diagnosable mental illnesses. Only half of the 28% of Americans a year suffering from a psychiatric disorder receive care, and only half again get their treatment at specialty mental health clinics (Regier et al., 1993). But 80% of Americans see a PCP in any given year (Strosahl, 1998). This suggests that patients with a mental illness are more likely to seek out a PCP for care

rather than a mental health specialist. The fact that 67% of psychotropic medications are prescribed by PCPs (James, 2009) adds further evidence to the leading role that primary care plays in mental health treatment today.

In addition to the more common mental illnesses such as depression and anxiety, behavioral problems often present in unusual or particularly challenging forms in the primary care setting. Current research suggests that 8% of primary care patients suffer from medically unexplained somatic symptoms that are thought to originate from psychosocial stressors (Jackson & Kroenke, 2008). Patients experiencing somatization have higher rates of health service utilization, are more likely to be labeled as “difficult” by their PCPs, and suffer greater incidence of comorbid mental disorders than research control groups. Despite receiving little help from medications or other conventional medical treatments, somaticizing patients continue to turn to help from primary care often leaving the PCP frustrated.

Other behavioral concerns often do not reach the severity of a diagnosable disorder, yet adversely affect overall health and frequently become of focus of attention in primary care office visits (Robinson & Reiter, 2007). Marital conflict, life transition adjustments, domestic violence, and other psychosocial issues often overwhelm PCPs as they struggle to use their scarce time and resources to manage and refer these problems appropriately. Unhealthy lifestyle behaviors such as smoking, obesity, and alcohol and drug abuse, identified as leading public health problems (Koh, 2010), also must all too often become the primary target of a PCPs' clinical attention.

Behavioral factors also become a component of many medical conditions, especially those of a chronic nature. Chronic medical problems such as diabetes, obesity, and hyperlipidemia are the fastest growing group of problems presenting at PC clinics (Patterson, Peek, Heinrich, Bischoff, & Scherger, 2002) and the management of such long-term conditions

requires lifestyle changes as well as ongoing self-management practices to maintain stability. Yet up to 60% of patients with these problems fail to adhere to treatment recommendations (Dunbar-Jacob & Mortimer-Stephens, 2001). PCPs have become the de facto counselor of such patients, regularly admonishing them toward healthier living with the fleeting minutes they have available to them after addressing lab results, vital signs, and medication management.

Facing such a wide range of people and problems poses quite a challenge to PCPs who seek to provide quality care to their patients. But this dynamic of broad inclusiveness of care inherent to primary care also gives rise to great possibility. Would a significant increase in the provision of primary care services be able to address the problem of high levels of untreated and under-treated behaviorally-related problems in the U.S.? With the passage of the Patient Protection and Affordable Care Act (ACA) in March of 2010, the product of recent health care reform legislative efforts, it is expected that 32 million newly insured patients will be seeking out a PCP over the next 4 years (Adashi, Geiger, & Fine, 2010). Additionally, \$47.6 million has been set aside to expand primary care training programs and \$12.5 billion to grow community health centers across the nation. Advocates of this legislation are hoping that more Americans receiving primary care services will lead to a healthier population and ultimately overall lower healthcare costs. The ACA also places an emphasis on prevention and health promotion with the formation of a new national council, fund, and array of community resources to support such efforts (Koh, 2010).

However, primary care, as it is currently structured, often struggles to effectively manage behavioral problems. Several organizational and cultural factors appear to be working against PCPs efforts toward better behavioral care. To begin, PCPs hear an average of three health concerns from a patient in each 10 to 15 minute office visit (Kaplan, Gandek, Greenfield,

Rogers, & Ware, 1995). This inevitably requires frequent prioritization of care and probable deferment of behavioral concerns. PCPs often lack training to effectively diagnosis and treat behavioral conditions (Grenier, Chomienne, Gaboury, Ritchie, & Hogg, 2008; Head et al., 2008; Henke, Chou, Chanin, Zides, & Scholle, 2008). Considering the dearth of time and training, referral of behavioral problems to a mental health specialist in the community would appear to be the best recourse a PCP might have. Unfortunately, patients all too often fail to follow up with behavioral referrals, further hindering their PCPs' efforts. A large-scale pediatric study (Rushton, Bruckman, & Kelleher, 2002) found that 39% of families presenting to their PCP with psychosocial problems and referred for services failed to see a mental healthcare provider in the 6-month period following referral. Some have suggested that low specialty mental health services utilization may be due to the heavy stigma that mental illness and services carries in our society (Corrigan, 2004). Such a strong cultural barrier may prevent PCPs from ever getting many of their patients with behavioral concerns into specialty mental health clinics.

Finally, should a PCP manage to convince their patient with behavioral problems to follow through with a specialist referral, they receive a frustratingly low rate of treatment feedback from the mental health specialist. In a study of primary care to mental health specialty referral (Yuen, Gerdes, & Waldfogel, 1999) PCPs reported that approximately 50% of the mental health providers to whom they referred their patients “never/seldom” reported information back to them. This lack of communication leaves PCPs wondering whether or not their referred patients actually received the healthcare they need and how best to manage the patient's concerns during the next visit.

## **Behavioral Health Integration**

Although those with behavioral health concerns are more likely to present for care in primary rather than specialty mental health care settings, PCPs appear to lack the resources and support to adequately manage such problems. This dilemma has not missed the attention of prominent health governing bodies and research groups. In 2002 U.S. President George W. Bush commissioned a task force to study mental health services in the U.S. and provided recommendations (President's New Freedom Commission on Mental Health, 2003) for areas of improvement. One of the main directives resulting from this commission is for a higher level of coordination between primary care and mental health services. That commission built upon an earlier declaration from the U.S. Surgeon General's office (US Department of Health and Human Services, 1999): "The fundamental components of effective service delivery...include integrated community-based services, continuity of providers and treatments" (Ch. 8, "Ensure the Supply of Mental Health Services and Providers").

The call to integration of behavioral health services has been answered by some notable healthcare organizations (Butler et al., 2008). The Veteran's Administration (VA) health system has integrated behavioral services among many of their medical sites, placing an emphasis on depression and post-traumatic stress (PTSD) management. Some well-known managed care companies such as Kaiser Permanente, Intermountain Health, and Group Health also staff their primary care teams with behavioral health specialists. And many community health centers (CHCs), clinics dedicated to providing care to under-served patient populations, have adopted treatment models that include collaborating medical and behavioral primary providers.

It is important to note that existing programs vary in the manner by which behavioral health services are brought into their primary care clinics. Some clinics choose to organize their

staff into treatment teams that include a medical provider, behavioral provider, nurses, and care coordinator who share a panel of patients, whereas other programs might make behavioral health specialists available as consultants to any PCP requesting assistance in the management of their patients. And still others may simply invite behavioral health providers to practice within their clinic building to facilitate referrals, but have little structured medical-behavioral collaboration procedures in place. Such differences can confuse those attempting to understand how behavioral integration operates and might improve patient care.

Alexander Blount (2003), a prominent advocate of primary care behavioral integration, suggested categorizing models of integrated behavioral care as *coordinated*, *co-located*, or *integrated*. He emphasizes that although significant differences in delivery of care do exist among his proposed model types, “the precise definition of these descriptions would be that they are dimensions of collaborative care, not mutually exclusive categories” (p. 122). Coordinated services usually occur when a patient receives a referral from one organization to obtain care at another and information about care in both organizations is routinely shared between providers. Blount points out that practice differences between coordinating agencies such as approaches to confidentiality, frequency of treatment, and promptness of communication may cause significant difficulty and stressors on coordination efforts. As such, major programs based on coordinated services often struggle and fail.

In co-located models medical and behavioral providers share clinic or office suite space and a common patient waiting area. Communication and procedural differences become less problematic as greater proximity and resulting increase of contact frequency tend to facilitate more effective collaboration. Blount noted that the vast majority of consultations between providers in a co-located model are unscheduled and usually last fewer than five minutes. Such



frequent and informal sharing of information tends to better inform medical providers of what behavioral providers can offer their patients and acculturates behavioral providers to the treatment structure and pace of primary care. Yet some problems persist in such a model, the most prominent of which might be patient referral follow-up. Although the co-located PCP and BHP may have more frequent contact, the availability of a BHP for introduction to a patient immediately upon referral from the PCP will often be lacking. Such a referral introduction, known as a “warm hand-off”, has shown to significantly improve otherwise poor behavioral health referral follow up rates.

Blount's final category of integrated care is structured by the delivery of a single, mutually agreed upon treatment plan for each patient by a multi-disciplinary team. At times multiple providers will see the patient (and sometimes their family as well) simultaneously to improve continuity of care. This method of intervention often resolves the previously cited referral follow-up problems. Treatment teams have frequently employed this approach along with pre-arranged protocols that manage the care of certain patient populations with particularly difficult to manage illnesses. Integrated care has been employed to address health problems considered “chronic illnesses” in which behavioral aspects are viewed as integral, such as depression or diabetes.

Along with efforts to better organize practice models, recent research to assess the effectiveness of behaviorally integrated primary care offers further understanding of these approaches. In a meta-analytic study, Butler, et al. (2008) reviewed the previously performed research on the implementation and outcome results of various models of care integrating primary care with specialty mental health services. Programs addressing a variety of medical and mental health as well as substance abuse problems were included in the review. Analyzing 38

head-to-head trials, better results were indeed found to be associated with integrated approaches. In particular, clinics targeting depression produced the greatest outcome improvements through behavioral integration.

However, Butler, et al. could not determine whether the better outcomes could be attributed to specifically integrated care or simply a more systematic, evidenced-based approach to behavioral care, which occurred more frequently in integrated than conventional primary care clinics. In addition, these researchers found no relationship between the level of behavioral integration (e.g. co-located, coordinated, etc.) in each model and the degree of outcome improvement. But they suggested that future research should more specifically parse the attributes of each model to more accurately identify differences and similarities to confirm this finding. Despite the lack of definitive findings on improvement attribution, Butler, et al. (2008) concluded that including behavioral services in primary care effectively provides needed services to a variety of populations and should continue to be pursued as the standard of care.

### **The Role of Psychologists**

Much of the current research performed and theory written regarding behavioral integration in primary care looks at the role of psychologists in this model of care. Building on those efforts, this study also examined psychologists and their views of participation in collaborative and integrative practice with medical providers. However, outcome research in behaviorally integrated models has not shown a significant difference between the providers of various behavioral disciplines (e.g. psychiatrists, psychologists, social workers, etc.) (Butler, et al., 2008; Chaffee, 2009). This might lead one to wonder why psychologists should get so much attention in the behavioral integration conversation.

Although the presence of psychologists in primary care settings remains relatively uncommon, psychologists have had a significant and growing presence in the medical field for several decades. In 1978 the American Psychological Association (APA), the most prominent governing body in psychology, formalized the Division of Health Psychology (38) noting the emergence of psychological practice in medical settings at that time (Belar & Deardorff, 2009). And the APA has since recognized health psychology as an official specialty of psychology as well as psychology in general as a healthcare discipline. An estimate now places the number of psychologists as full-time faculty at U.S. and Canadian medical schools at over 4,000 (Tovian, Rozensky, & Sweet, 2003).

In addition to officially self-identifying as a healthcare discipline and establishing itself within medical education circles, psychology has moved toward the forefront of behavioral health delivery in medical settings. Among non-prescribing behavioral health providers, only psychologists and clinical social workers are reimbursed for behavioral health services by Medicaid and Medicare (U.S. DHHS, Health Services Resources Administration, 2003), the largest health insurance programs in the U.S. Also, psychologists deliver 95% of the Health and Behavior services (behavioral services for non-psychiatric conditions) reimbursed by Medicare (APA Practice Organization, 2006).

Researchers in health psychology have pointed out that this prominent position of psychology in medical settings is no accident (Chaffee, 2009; Tovian et al., 2003). Rather, the broad diagnostic, treatment, and research skill set developed as a part of psychologists' standard training programs prepares them particularly well, relative to other behavioral health providers, to practice in both general medical as well as primary care settings. Tovian, Rozensky, and Sweet (2003) articulated well the strengths psychology offers:

Psychologists are in a unique position to be leaders within medical settings because of their broad clinical skills, carefully considered ethical standards, and extensive applied science skills, which are applicable to program evaluation, clinical outcome and clinical trials research, and medical cost offset studies that document the effectiveness of psychological interventions (p.5).

For these reasons psychologists appear to be the primary behavioral health provider of choice for those attempting to develop behavioral integration approaches in primary care settings. In turn, psychologists are also prime targets for research regarding the pace of behavioral integration implementation.

### **Barriers to Integration**

After considering the high frequency with which behavioral problems present at primary care settings, the difficulty PCPs experience in attempting to manage them, and the support from the body research and policy-making groups for behavioral integration, someone unfamiliar with the standard of primary care in the U.S. would likely assume that there was at least one BHP providing integrative care in most primary care clinics in the nation. Unfortunately, this does not appear to be the case. What is going on? What might be blocking an otherwise seemingly obvious health care system improvement?

As in many other system-level changes, the failure of widespread primary care behavioral integration is more likely multi-causal rather than the fault of any one factor. Some experts in the field have blamed the organizational and financial fragmentation of the US health system calling it a “patchwork of poorly coordinated systems” (Garcia-Shelton, 2006) (p. 676). This “patchwork” includes various private and public care delivery systems as well as third party payers with limited consistency and direction from independent oversight. This chaos often

discourages the valuing of long-term health outcomes among many of the more powerful stakeholders of the system (i.e. insurance companies and private healthcare networks). Therefore, the current lack of an organized effort toward prevention and chronic disease management care delivery, which includes most behavioral conditions, is of little surprise (Kathol et al., 2006).

While the above systemic and economic impediments often prove overwhelming to most coordinated attempts to improve healthcare in America, might there be other significant factors at play? What if the various providers, whose methods of practice may need to change significantly, turn out to be unwilling or unprepared to take on the new treatment models and settings of integrated care? Might the lack of progress in behavioral integration be due in part to widespread and rigid provider attitudes incompatible with an integrative approach?

Though somewhat limited, research to date suggests that medical providers desire greater access to psychological services for their patients and believe that the inclusion of psychologists into medical practices might provide improved care (Gerdes, Yuen, Wood, & Frey, 2001; Grenier et al., 2008; Kainz, 2002; Westheimer, SteinleyBumgamer, & Brownson, 2008). This research also seems to indicate that when working closely with psychologists, medical providers generally value the services provided by the psychologists and view these services as appropriate for a variety of presenting problems. In addition, the studies specific to PCPs were consistent in their major findings with those looking at medical providers in general.

As limited in scope and few in number as the studies of PCP attitudes of behavioral providers are, even less published empirical research exist regarding psychologists' or other speciality behavioral providers' attitudes toward medical providers and medical care. Do providers of traditional mental health care see working alongside PCPs in a primary care context

as an appropriate means to deliver behavioral care? Could the differing clinical cultures of behavioral and medical providers be impeding the implementation of integrated care? So far experts have answered such questions mostly by anecdotal observation and speculation alone.

### **Psychologists' Attitudes toward PCPs and Integrated Primary Care**

The only published study found collecting data from psychologists (or any other behavioral health providers) regarding their attitudes toward PCPs' or primary care in general examined both BHPs and PCPs' attitudes about collaboration with each other and their beliefs about the interaction of mental and physical health concerns (Gavin et al., 1998). Gavin, et al. adapted the Physician Belief Scale, a measure of physician beliefs about psychosocial concerns and patient care (Ashworth, Williamson, & Montano, 1984), to survey 47 PCPs and 37 behavioral health practitioners practicing in non-integrated, physically separate clinics belonging to a large HMO. They found that 68% of the BHPs surveyed strongly agreed with the statement “Mind and body influence medical disease and body perception.” Additionally, those BHPs whose training programs emphasized collaboration with medical providers and who perceived that the organization where they currently practice expected them to collaborate tended to do so more frequently and with greater reported ease.

However, Gavin et al. also found that although younger BHPs professed a greater adherence to a biopsychosocial approach than their more senior counterparts, these BHPs also reported collaboration with medical providers as more difficult and less useful. Gavin, et al suggested that this finding might indicate that younger BHPs lack the confidence to interact with medical providers comfortably, but will feel differently with increased experience. They concluded that collaboration overall would be greatly enhanced if healthcare organizations

simply provided increased opportunities for interdisciplinary contact, implemented shared charting systems, and made available contacts lists of providers.

Yet other authors addressing the topic of behavioral providers' attitudes of medical providers and primary medical care have argued that the lack of interaction between psychologists and medical providers has led to something of a self-sustaining dynamic, resistant to simple organizational changes in clinics. In a review of models and current efforts of behavioral health integration in primary care, Collins, Hewson, Munger, and Wade (2010) identified the provider-related impediments to integration as “significant cultural barriers” (p. 48) resulting from “behavioral and physical health providers [having] long operated in their separate silos” (p.4). In particular, Collins, et al. cited poor communication and information sharing between behavioral and medical providers regarding shared patients as a consequent problem from on-going discipline separation.

Blount (2009), also writing about the unmet training needs of primary care psychologists, noted there are few doctorate-level clinical programs that provide a full training experience in integrated primary care. He criticized what he sees as a lack of education in clinical collaboration in psychology graduate programs, an essential component of primary care. Such separation and differing models of care quite often engender a sense of competition within psychology education circles toward physicians. As a result, the overarching message passed to psychologists-in-training is that they do not belong in the same place as and working in close collaboration with medical providers. This sentiment leads to a lack of comfort, interest, and experience working in healthcare settings.

Bluestein and Cubic (2009), in an article addressing inadequacies in current training programs for clinical psychologists, outlined more specific differences they saw between

conventional behavioral care and the skills and requirements of behavioral providers effectively practicing in integrated primary care settings. Although most psychologists providing psychotherapy treat a relatively small number of patients within a specialized area (e.g. a caseload 20 adult clients in individual therapy for anxiety disorders), psychologists practicing in integrated primary care must manage a much larger panel of diverse patient demographics and presenting problems (i.e. several hundred patients and families with the range of DSM diagnoses as well as various general health conditions). Covering the issue of information sharing, Bluestein and Cubic observed that traditionally psychologists “give confidentiality utmost importance over coordination of care” (p. 106), whereas primary care psychologists conceptualize their interventions in the context of a team process, regularly and openly sharing information with their patients' PCPs. Last, conventional psychological care includes an in-depth initial assessment and assumes an extensive course of treatment of 45 minute to hour-long sessions. But primary care for behavioral concerns involves targeted assessments and brief interventions, often spanning only one short session.

Pomerantz, Corson, and Detzer (2009) presented various aspects of traditional mental health care delivery they perceive to be hindering clinical psychologists from accepting or adjusting to an integrated primary care model. Based on their experiences in a behaviorally integrated VA medical clinic, they argued that provider factors may be equally culpable for the slow pace of integrated care implementation as are the more frequently cited organizational and financial factors. Summarizing their personal observations, they organized the clinician factors they see as hindering psychologists' willingness to practice within an integrated model into several categories.



**Differences in Competencies.** Pomerantz, et al. (2009) emphasized the need for a very high level of flexibility in therapeutic approaches and populations served to operate in primary care. Over the period of an hour a primary care psychologists might see a middle aged man interested in smoking cessation, a family with a pre-diabetic child, a teenager with prodromal schizophrenia, and a couple with suspected domestic violence problems. However, as similarly noted by Bluestein and Cubic (2009), traditional mental healthcare providers tend cultivate specific clientèle and approaches that include numerous sessions of hour-long length. This results in a narrowing of their areas of perceived competence and comfort and reflects strong emphasis on relationship building. Pomerantz, et al. posit that even the more manualized approaches in traditional MH interventions (e.g. CBTs) may feel that the time spent with patients is too short in an integrated care model, which utilizes very brief and problem focused interventions.

**Theories of Treatment.** Clinical psychologists often develop acute awareness about and remain highly adherent to a particular theory or group of theories of treatment. Insight oriented theories (e.g. psychodynamic, humanistic, etc.) as well as most conventional CBTs view the primary care approach as too short to apply the techniques believed to be necessary according to such conceptualizations. As such, psychologists providing conventional mental healthcare often view the rapid pace and brief encounters common to primary care as “substandard and/or just another way to deny necessary care to patients” (p. 42). Pomerantz, et al., however, commented that such a perspective reminded them of “the resistance to cognitive/behavioral therapies when first introduced in the latter part of the twentieth century” (p. 42).

**Health Psychology vs. Specialty Mental Health Psychology.** Many in the field of clinical psychology view health psychology and mental healthcare as exclusive disciplines:

health psychologists solely provide medical patients with methods of coping with their disease and refer all those with a mental illness diagnosis to specialty mental health clinics. A primary care model does not fit into this dualistic understanding of medical and mental healthcare. Yet given that nearly half of all primary care patients will suffer from mental illness at some point their lives, the need for mental health services in primary care clearly does not respect the medical/mental health divide engraved into conventional models of care.

**Perceived Loss of Autonomy.** Traditional mental health care often allows clinicians to see themselves as the sole provider of treatment, independent and autonomous of their patients' other healthcare providers. This has allowed significant freedom of treatment approach for the provider and often deprived the patient of continuity of care. In contrast, an integrated primary care model uses a team approach with each provider's preferences taking a back seat to the plan developed by the healthcare team.

**Strangers in a Strange Land.** Pace, physical setting, and perceptions of the level of need for services varies significantly between primary care and traditional mental health clinics. Most outpatient mental health providers have become accustomed to practicing in a relatively quiet, uncrowded setting in which they generally see each patient for up to an hour at a time. Primary care clinics on the other hand tend to be very busy and often managing health crises. These differences can lead to the perception of mental health care as less scientific or necessary by other healthcare providers. Recognizing these attitudes among medical providers, many mental health providers then avoid practicing in such places where they feel their services are unsupported and disrespected.

**Concerns about the “Medical Model”.** Many in traditional mental healthcare see the “medical model”, the dominant approach in healthcare, as only treating symptoms and

oversimplifying patient problems. The extensive assessment and conceptualizations common to specialty mental health often attempt to tie all problems together into an interconnected picture of dysfunction and then proceed with treatment to address all the perceived pathologies. But the common primary care approach tends to prioritize problems and does not necessarily equate pathology with dysfunction. A primary care office visit may uncover other health concerns but unless that problem is a serious and immediate threat to the patient's health the PCP will focus almost solely on the problem with which the patient presented.

### **Summary and Study Hypotheses**

The need for more effective models of behavioral care has been made quite clear by the research regarding issues of access and utilization. Primary care appears to be ideally positioned to ameliorate many of the problems plaguing traditional behavioral care. Indeed, research performed thus far on clinics and organizations implementing various models that integrate behavioral care into primary care settings has produced promising findings. However, despite relatively strong empirical support and rallying calls by many prominent figures in healthcare, integrated primary care remains the exception.

In attempting to explain this state of affairs, most behavioral health researchers have bemoaned the financial constraints of shortsighted third-party payer systems and the resulting fragmentation of U.S. healthcare in general. But others have suggested that clinician factors may also play a significant role in the slow pace of behavioral integration into primary care. In particular, several authors have observed among psychologists an on-going reluctance to participate in integrated primary care. They have argued that such unwillingness can be attributed to an historical separation between behavioral and medical healthcare training and practice that has resulted in increasingly divergent theories, techniques, and attitudes about

effective care. These explanatory assertions likely have merit, yet at this point in time have little empirical support.

In the following described study I sought to test the above theories about the state of psychologists' participation in integrated care and answer the question how are formal clinical training and course work related to the attitudes and practice behaviors of clinical psychologists in collaborating with PCPs. This was performed by administering to licensed clinical psychologists a questionnaire about practice behaviors and attitudes related to collaboration with primary care providers. In addition, a scale measuring mental health providers' beliefs about biopsychosocial conceptualization and care of their clients was also administered. Considering the previously cited literature, the following results of this study were expected:

**Hypothesis 1.** Participants who endorsed clinical training experience in medical settings (ME) were expected to endorse more positive attitudes toward primary care (PAPC, i.e. openness to collaborating with primary care providers and integrated primary care models) than participants who endorsed no significant clinical training experiences in medical settings (NME).

**Hypothesis 2.** The ME group were expected to endorse greater integrative practice behaviors (IPB, i.e. including their clients' physical health into conceptualization of care and collaboration with their clients' primary care providers) than the NME group.

**Hypothesis 3.** Within the ME group, those participants who endorse coursework directly related to practice in medical settings (MC) were expected to score higher on PAPC and IPB than those participants who only endorsed clinical practice experience in medical settings.

**Hypothesis 4.** Participants who identified with a particular traditional theoretical orientation (i.e. psychodynamic, humanistic/existential, etc.) were expected to score lower on PAPC than those who endorse a-theoretical or trans-theoretical models of treatment.

**Hypothesis 5.** Participants who endorsed current or past experience practicing in inpatient, outpatient, and rehabilitation medical centers were expected to score higher on PAPC and endorse more IPB than those who endorsed only practicing privately, in community mental health agencies, counseling centers, residential treatment centers, or educational settings.

## **Method**

### **Participants**

In the first phase of recruitment 503 US licensed clinical psychologists were mailed study recruitment post cards (Appendix A) to addresses from licensee lists publicly available through state boards of psychological examiners websites. Individuals from 3 states of each of the 4 regions (West, Midwest, South, and Northeast) of the United States systematically selected (every 20<sup>th</sup> name) to be mailed an invitation to participate in this study. Selection was restricted to those with an address located in an area with a Rural-Urban Continuum Code from the United States Department of Agriculture (USDA; Parker, 2004) of 1, 2, or 3. These designations indicate areas considered to be metropolitan by the US government. This approach of targeted sampling reflected an attempt to solely draw those participants who experience few external barriers to interacting with medical providers, who are generally in greater numbers and accessibility in and around urban centers. This phase of recruitment produced a response of 17 (3%) participants.

In the second phase of recruitment email requests were sent to all 50 state psychological associations, all seven US regional psychological associations, 12 American Psychological Association special interest divisions, four non-psychology professional associations to post a study invitation (Appendix B) and hyperlink to the study survey on their respective email listservs. In addition, a study invitation and hyperlink was posted at several websites related to the work of mental health professionals. The response to this secondary recruitment effort produced a final survey response total of 119.

## Survey

The 37-item questionnaire (Appendix C) included mostly forced response items with 13 items presenting the participant with the alternative to construct a brief response (i.e. an “other” option) and 1 constructed item requesting non-psychologist participants to indicate what coursework relevant to practicing in medical settings they have completed. The first 14 items asked participants to attest to the inclusion criteria and inquired about basic demographic identification (age, gender, etc.) and practice information (e.g. region, setting, years of practicing, etc.). The inclusion of items 17 through 23 regarding the nature of participants' education and training experience as it relates to practicing in medical settings was an attempt to confirm and extend the findings of Gavin, et al (1998) that BHPs whose training emphasized collaboration with medical providers found it easier to do and did so more frequently. Blount's (2009) assertion that the absence of graduate training involving collaboration with medical providers has perpetuated attitudes of separateness and resistance to integration will also be tested in this way. In addition to the question of whether the participant had clinical education and training experiences related to practice in medical settings, these items also ask about type of classes, medical settings, specialty of medical provider, and stage of training. These items were included in order to test for attitude and behavior differences in those with varying types of training experiences in medical settings.

In response to compelling research documenting the pleas by physicians for greater feedback from psychologists to whom they refer their patients (Yuen, et al, 1999; Grenier, et al., 2008), items 24 to 28 were constructed to assess what practices related to medical referral participants perform. In addition to querying about whether participants provide PCPs with information regarding the treatment of their patients, these items addressed reasons for

interacting with a client's PCP as well as frequency and rationale for obtaining and reviewing medical records. For example, item 27 asks, “What prompts you to obtain and/or review your clients' health records?” and allows participants to check all of the following situations that apply to them:

- Client prescribed psychotropic or other psychoactive medication
- Client a poor historian/reporter of medication
- Rule out psychosomatic diagnoses
- Identify health conditions and treatments that might be causal/maintenance/exacerbating factors in mental/behavioral health
- Always request and review medical records of clients

Items 29-36 involve attitudes toward collaboration with medical providers and the delivery of behavioral care in primary care settings. These items were constructed rationally from the theoretical concepts of Pomerantz, et al. (2009) regarding the basis of clinical psychologists' struggles and resistance towards collaborating with PCPs and practicing in primary care settings. For example, item 31 asks, “What do you believe to be the minimum session length possible for a psychologist to provide an effective therapeutic intervention?” and includes the following response options:

- 10 minutes or less [5]
- 15 to 20 minutes [4]
- 20 to 30 minutes [3]
- 30 to 45 minutes [2]
- 45 to 60 minutes [1]



Participants also completed an item from the Physician Belief Scale (Ashworth et al., 1984) adapted by Gavin et al. (1998) to assess mental health providers' beliefs about biopsychosocial conceptualization and treatment of their clients. The Physician Belief Scale was originally developed and validated in 1984 by Ashworth, Williamson, and Montano as an instrument to measure the beliefs primary care physicians hold regarding the psychosocial aspects of patient care. Gavin et al. rationally derived (rather than statistically due to the limited number of participants) 4 subscales: (a) Ease and Usefulness of Collaboration, (b) Comfort Addressing Patients' Health Issues, (c) Perceived Burden to Practice, and (d) Belief in Mind-Body Approach. Analysis of internal consistency produced Chronbach's alpha values of .76 to .77. This researcher was unable to obtain the full measure for use. However, the item “Mind and body influence medical disease and body perception” was identified by Gavin, et al. (1998) was highly correlated with mental health providers who endorsed items measuring comfort with and frequency of collaborative care with medical providers. As such, it was included as an exploratory “stand alone” item in this study's survey.

The survey was piloted with a clinical psychologist working in primary care setting for timing and comprehension. This psychologist completed the survey in approximately 20 minutes; asked clarifying questions regarding items 21 and 22; and suggested wording changes to items 33. These concerns were addressed by editing these items and response of options questions.

## **Procedure**

Initial recruitment was performed systematically (every 20<sup>th</sup> name) from alphabetical listings of psychology licensees on state boards of psychological examiners websites. The mailing participants received (Appendix B) directed them to navigate to an Internet webpage

hosted by the website SurveyMonkey.com. A secondary recruitment effort invited study participants via professional association listservs and Internet webpages, which included a hyperlink to the study survey webpage. Upon navigating to the webpage, participants were presented with a briefly stated purpose of the study, estimated time to complete, and informed consent (Appendix C) . Participants were then given the option to agree or not agree to participate. Those who chose to agree were directed to the above-described questionnaire and scale and requested to complete all items. In an effort to ensure anonymity, no personally identifying information is requested in the informed consent, questionnaire, and scale. The investigators will thus be unable to link study responses to any particular participant name, address, license number or any other identifying information.

### **Analysis**

Upon completion of data collection, the study data was downloaded from SurveyMonkey.com into the software program Excel in order to be examined for critical omissions and patterns suggesting invalid responding. Such incidents were determined to have occurred in 14 responses. These responses were removed from the final total ( $n= 438$ ) and data analysis. This data was then imported into the software program SPSS in order to perform statistical analysis of the final data. A One-way ANOVA was used to compare the ME group with NME group responses.

## Results

### Demographics

A total of 119 survey responses were collected at the time of analysis. Of the 119 survey responses, 15 were excluded from the analysis due to being incomplete or from non-psychologist providers, leaving a final sample size of 104. Respondents were 67% female (remaining identified as male) and practicing in one of the four major US geographical regions (26% West, 32% South, 34% Midwest, and 8% Northeast). The most frequently reported age range and years of practice was 60 to 69 (Figure 1) and 25+ (Figure 2), respectively.

Figure 1. Age distribution of participant:

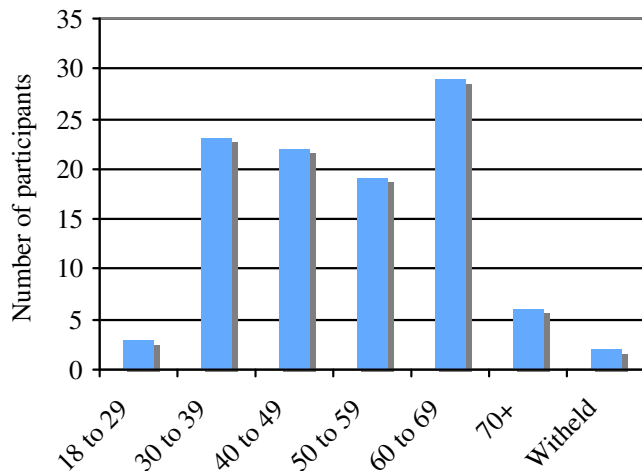
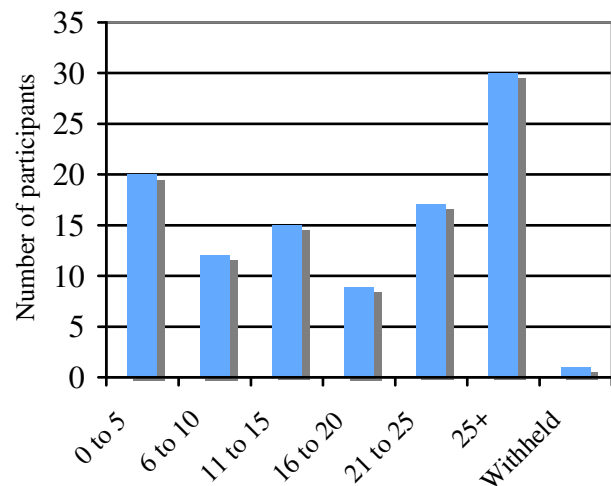


Figure 2. Years total practice of participants



The most commonly endorsed current practice setting was individual and/or group private practice (69.2%), but a wide variety of other practice settings were also endorsed (Table 1) with participants able to identify multiple settings in which they currently practice, if applicable.

Table 1

*Current Practice Setting(s) of Participants (n=104)*

Setting	n	% total
Private Individual and Group Practice	72	69.2
Mental Health Agency	13	12.5
Inpatient Psychiatric	5	4.8
Inpatient Medical	7	6.7
Primary Care	9	8.6
Outpatient Specialty Medical	16	15.4
Substance Abuse Rehabilitation	3	2.9
Physical Medicine Rehabilitation	5	4.8
Educational (counseling and/or testing)	7	6.7
Educational (faculty)	11	10.6
Corrections/Forensic	4	3.8
Other	8	7.7

Of the total participants, 47 identified as having professional experience in medical settings and 68 endorsed practical training experiences in a medical setting (ME group). Thirty-seven participants (35.6%) endorsed completing graduate coursework directly related to practice in medical settings.

**Analysis of Hypotheses**

The study data was downloaded as a Microsoft Excel spreadsheet and imported into SPSS for statistical analyses comparing group means. In all statistical tests an alpha significance level of .05 was used.

*Hypothesis 1*

*Participants who endorsed clinical training experience in medical settings (ME) were expected to endorse more positive attitudes toward primary care (PAPC, i.e. openness to collaborating with primary care providers and integrated primary care models) than participants who endorsed no significant clinical training experiences in medical settings*

(NME). A one-way ANOVA showed no significant statistical difference ( $F = .097, p = .756$ ) between the ME group and the NME group on the total score of the items designed to measure PAPC.

#### *Hypothesis 2*

*The ME group were expected to endorse greater integrative practice behaviors (IPB, i.e. including their clients' physical health into conceptualization of care and collaboration with their clients' primary care providers) than the NME group.* A one-way ANOVA showed no significant statistical difference ( $F = .010, p = .921$ ) between the ME group and the NME group on the total score of the items designed to measure IPB.

#### *Hypothesis 3*

*Within the ME group, those participants who endorse coursework directly related to practice in medical settings (MC) were expected to score higher on PAPC and IPB than those participants who only endorsed clinical practice experience in medical settings.* A one-way ANOVA produced no significant difference between psychologists who endorsed completing coursework related to practice in medical settings and those who did not on PAPC score ( $F = .112, p = .739$ ).

#### *Hypothesis 4*

*Participants who identified with a particular traditional theoretical orientation (i.e. psychodynamic, humanistic/existential, etc.) were expected to score lower on PAPC than those who endorse a-theoretical or trans-theoretical models of treatment.* A one-way ANOVA showed no relationship between theoretical orientation and PAPC ( $F = 1.095, p = .363$ ).

#### *Hypothesis 5*

*Participants who endorsed current or past experience practicing in inpatient, outpatient, and rehabilitation medical centers were expected to score higher on PAPC and endorse more IPB than those who endorsed only practicing privately, in community mental health agencies, counseling centers, residential treatment centers, or educational settings.* Those participants who endorsed current or past professional practice in medical settings were found by *t*-test to endorse significantly more collaborative actions taken on management of client cases referred from PCPs ( $t=3.943, p<.000, 95\% \text{ CI } [.533, 1.614]$ ). No difference was found between these groups on PAPC ( $t=1.535, p=.129$ ) or the number of instances in which psychologists obtain and review their client's health records ( $t=1.96, p=.053$ ).

### **Post Hoc Analyses**

After the initial analysis of the data, several post-hoc analyses were conducted. Those who endorsed medical training experience solely in psychiatric settings were reassigned from the ME group to NME group. 14 participants (13.5%) who endorsed training in medical settings were determined to have psychiatric setting experience, but no training in other medical settings. 9 participants (8.7%) who endorsed past or present professional experience in a medical setting were determined to have no professional experience in other medical settings besides psychiatric. Additionally, the construct of IPB was separated by each item composing it in order to analyze each collaborative practice domain individually. A significant difference was found between the newly formed ME and NME groups on the survey item (#29) measuring collaborative actions taken on the management of client cases referred from PCPs ( $t=2.089, p=.039$ ), but not on instances of reviewing clients' health records ( $t=.566, p=.573$ ) or PAPC scores ( $t=.812, p=.419$ ). The same group membership criteria change was made for participants who endorsed professional medical experience and no significant differences were found on collaborative

actions ( $t=1.635$ ,  $p=.105$ ), review of health records ( $t=1.144$ ,  $p=.255$ ), or PAPC ( $t=1.819$ ,  $p=.072$ ).

This researcher chose to pursue another exploratory post-hoc analysis of the variables of training in medical settings and graduate coursework related to practice in medical settings by transforming them from categorical to continuous variables based on participant responses items requesting them to identify the type of medical settings they trained in and courses they completed. An analysis of correlations was then performed among the variables a) number of courses, b) number of training experiences, c) collaborative actions taken on PCP-referred cases, d) number of EHR-reviewing incidents, and e) PAPC. The number of courses and training experiences were found to be significantly correlated ( $r=.460$ ,  $p<.000$ ) with each other. Also, the number of endorsed collaborative actions in the management of client cases referred from PCPs ( $r=.404$ ,  $p<.000$ ) and the number of situations in which a participant obtains and reviews their clients' full health record ( $r=.213$ ,  $p=.03$ ) were both positively correlated with positive attitudes toward primary care practice and collaboration as well as with each other ( $r=.290$ ,  $p=.003$ ; Table 2). A positive relationship was found between courses and the number of instances in which psychologists obtain and review their client's health records ( $r=.208$ ,  $p=.034$ ; Table 2).

Table 2

*Collaborative Attitudes, Practices, and Education (n=104)*

Measure	1	2	3	4	5
1. PAPC	---				
2. EHR Reviewing	.213 <sup>a</sup>	---			
3. PCP-Referred Actions	.404 <sup>b</sup>	.290 <sup>c</sup>	---		
4. Courses	-.081	.208 <sup>d</sup>	.099	---	
5. Training Experiences	.068	.039	.172	.460 <sup>e</sup>	---

<sup>a</sup> $p=.03$ , <sup>b</sup> $p<.000$ , <sup>c</sup> $p=.003$ , <sup>d</sup> $p=.034$ , <sup>e</sup> $p<.000$

Effects were not found between the number of courses related to practice in medical settings ( $r=.081, p=.415$ ) or the number of medical training experiences ( $r=.068, p=.494$ ) on PAPC scores.

An additional analysis was performed to examine the potential effects of stage of education in which participants engaged in practical training in a medical setting. Of the 55 (53%) participants who endorsed training experiences in medical settings, 33 endorsed both practica (pre-internship, part-time, graduate-level) and internships or post-doctoral (post-doc) training experiences in medical settings, whereas 23 endorsed only internship or post-doc experiences in medical. Those who endorsed both practica and internship and/or post-doctoral training experiences in a medical setting reviewed their clients' health records more frequently than those who endorsed only practicum or internship/post-doc experiences ( $t=-2.409, p=.019$ ; Table 3). A significant effect was not found between stage of training collaborative actions with PCP-referred clients ( $t=-1.474, p=.146$ ) and PAPC score ( $t=-1.081, p=.285$ ).

Table 3

*PAPC and IPB by Stage of Practical Medical Training*

	Grad Practica or Internship/ Post-Doc Alone ( $n=23$ )	Both Grad Practica and Internship/Post-Doc ( $n=33$ )		
	$M(SD)$	$M(SD)$	$p$	95% CI
PAPC	24.78(7.205)	26.48(4.590)	.363	[-4.86, 1.456]
EHR Reviewing	1.70(1.020)*	2.55(1.460)*	.010	[-1.557, -.143]
PCP-Refer Actions	2.48(1.592)	3.09(1.487)	.427	[-1.446, .221]



## **Discussion**

Health care delivery models that integrate various disciplines into one "medical home" have received significant empirical and policy support in recent years (Butler, et al., 2008; President's New Freedom Commission on Mental Health, 2003; US Department of Health and Human Services, 1999). A major component of this integrated approach is the inclusion of psychologists and other mental and behavioral health providers into primary care clinic teams. Improved access, continuity of care, and clinical outcomes have all been found to result from such efforts. Despite these established benefits to integrated care, the actual implementation and participation by psychologists appears to be uncommon (Gray, Brody, & Johnson, 2005). In addition, health researchers have also found that even when PCPs do successfully refer patients to specialty mental health providers in the community, including psychologists, the PCPs often receive little if any communication from the mental health providers about the progress or outcome of treatment (Yuen, et. al, 1999; Grenier, et al., 2008). A few researchers have attempted to identify and describe what facilitates and hinders psychologists from engaging in collaborative practice with PCPs. Gavin, et al. (1998) and Blount (2009) provide strong arguments for the role of the approach of psychologists' education and their openness to and engagement in collaborative practice with PCPs as a factor in psychologist participation in collaborative and integrative practice. Pomerantz, et al. (2009) outlined various cultural and philosophical factors prevalent in psychology such as theoretical allegiances, commitment to provider autonomy, and discomfort with brief interventions that they believe to be a hinderance to greater engagement of psychologists in collaborative care with PCPs.

The goal of this study was to investigate the question how are formal clinical training and course work related to the attitudes and practice behaviors of clinical psychologists in

collaborating with PCPs. Empirical evidence was gathered to determine if the factors proposed by this researcher and the previously cited authors for the disappointingly slow adoption of integrated care among psychologists were related to attitudes and practice behaviors inconsistent with primary care collaboration. A broad sample of US licensed psychologists representing various US regions, ages, years of practice experience, and practice settings provided the data to begin to answer the study question.

Of particular note in this study is the fact that the hypotheses as initially constructed proved mostly unsupported by the resulting data. The categorical presence or absence of medical setting training or courses directly relevant to practice in a medical setting showed little effect on the dependent variables of attitudes toward primary care and integrative practice behaviors. In addition, no effect was found based on theoretical orientation of study participants. Therefore, multiple post-hoc analyses were performed to further explore potentially important variable relationships that were not initially considered. This researcher understood the need for multiple post-hoc analyses as indicative of the preliminary and thus exploratory nature of this area of research.

First, independent variables of medical setting training and coursework were analyzed as continuous data, rather than the initial categorical format, based on participants' follow-up to responses to their endorsement of having engaged in these educational components. This appeared to be a valid alternative approach to answering the research question as it seemed reasonable to hypothesize that those with a greater portion of their education composed of experiences relevant to practice in medical settings would respond differently to measures of attitudes toward collaboration with primary care and reporting of integrative practice behaviors. Additionally, this researcher reconsidered the inclusion of experiences in inpatient and outpatient

psychiatric centers as medical settings after the data collection and initial analysis, which produced mostly insignificant results. This post-hoc analysis also appeared reasonable as psychiatry has long been considered as part of the separate realm of mental health, often segregated from the rest of healthcare, despite the fact that psychiatrists hold medical degrees (Goldberg, 1999). The final post-hoc analysis involved the responses identifying the stage training in which psychologists engaged received experience in medical settings. Although no known literature exists looking at the effects of stage of clinical psychology training on collaborative practice behaviors and attitudes, it appeared relevant in the context of an exploration of provider factors on collaborative and integrated care.

### **Explanations for Study Findings**

Results evidenced no significant difference among psychologists' attitudes toward collaboration with primary care based on the various educational or professional experience variables measured. These results held consistent even when the groups were adjusted for psychiatric experience and stage of training was considered. An overall mean score of 25.68 out of a possible 40 on the PAPC items was found, suggesting that psychologists overall tend to hold positive attitudes toward primary care and collaboration with primary care providers. These findings were somewhat surprising given the reasonable arguments put forth by Pomerantz, et al. (2009) and Bluestein and Cubic (2009) for the existence of particular attitudes and cultural factors with traditional clinical psychology settings that serve as barriers to openness in collaboration with primary care. However, given these empirical findings, it appears more likely that psychologists' attitudes toward primary care and collaboration with psychologists are unaffected by educational or professional experiences in medical settings.

When considering actual collaborative and integrative actions taken, those with educational and professional experiences in medical settings tended to report engaging in such practices significantly more often. The number of training experiences in medical (non-psychiatric) settings and professional experience in medical settings were both found to be significantly correlated with the number of collaborative actions endorsed in cases referred from PCPs (although, when those endorsing professional medical experience only in psychiatric settings were moved to the non-medical experience group, the effect no longer met the statistical significance criteria). In addition, the number of completed courses that were directly related to practice in medical settings was found to be correlated with the number of instances in which psychologists obtain and review their client's full health records. These findings suggest that although educational content and experiences do not seem to affect psychologists' attitudes about collaborative care, the degree to which they engage in actual collaborative behaviors likely does differ based on their training.

Gavin, et al. (1998) found in their study of behavioral health providers (BHPs) in a non-integrated HMO that the BHPs supported a biopsychosocial conceptualization of their clients and as well as a collaborative approach with their clients' PCPs. However, they also found BHPs whose training programs did not emphasize collaboration were less likely actually do so in practice. The results of this study appear to support the findings of Gavin, et al., which also displayed the apparent split between reported attitudes and behaviors of those with minimal education or experience in collaboration. The lack of collaboration and communication of psychologists with PCPs, in particular, is consistent with the work of Yuen, et al. (1999) and Grenier, et al. (2008). In surveying PCPs they frequently heard complaints that the psychologists to whom they referred their patients did not communicate with them treatment progress or

outcomes, information essential for PCPs to provide effective ongoing preventive and primary care.

What is preventing psychologists without significant educational or professional experience in medical settings from communicating with their clients' PCPs or reviewing their clients' health records as part of their initial assessment and ongoing treatment? As suggested by Gavin, et al. (1998), a lack of past experience interacting with medical providers may lead to a lack of confidence or comfort with interprofessional collaboration and thus inhibit psychologists from doing so as standard practice. Other various potential barriers appear to exist for the non-collocated or integrated psychologists to collaborating with their clients' PCPs. The extra effort and time required to try to contact a busy PCP or obtain a copy of records from a separate organization that the psychologist will often be unfamiliar may pose a significant hurdle. Unless the psychologist is salaried and not tied to service quotas, the psychologist may feel the pressure of limited time and ever-shrinking reimbursement for their services too intensely to feel able to engage in practices beyond direct client contact and bare essential record keeping. Additionally, a salaried psychologist who is an employee of a non-medical organization may not be supported practically or procedurally in their efforts to regularly interact with their clients' PCPs. Finally, psychologists often assess and treat clients with severe and persistent mental illness (SPMI) who often lack employment, insurance, and thus the means to afford established and ongoing care with a PCP. And even when those clients with SPMI are enrolled in a Medicaid or Medicare program, they often fail to establish ongoing care with a PCP, leaving the psychologist no other regular healthcare provider with whom to collaborate.

Pomerantz, et al. (2009) also identified a strong adherence to a particular psychological theoretical orientation as a likely inhibiting factor in psychologist/PCP collaboration and general

openness to primary care practice. An examination of the results of this study did not support Pomerantz and colleagues' assertion, finding no effects of theoretical orientation on beliefs regarding collaboration. The majority of respondents (58%) identified with both more traditional psychotherapeutic orientations such as psychodynamic and humanistic-existential and more contemporary models and approaches like CBT and Solution-Focused Therapy. This finding may indicate that a high degree of theoretical integration currently exists across settings and modalities with few holding significantly different perspectives on the role of psychologists in healthcare based theoretical orientation.

Finally, this researcher examined responses identifying the stage training in which psychologists received experience in medical settings. The study findings indicated that those with both practica and internship/post-docs in medical settings were more likely to obtain and review their clients' medical records than those with only practica or internship/post-doc experience. This study result may indicate that those with more training in medical settings have a greater understanding and/or comfort with medical records and have developed a greater utility for them in psychological assessment and treatment. Those with less training in medical settings may have a general belief that reviewing records can be helpful, but not have had full opportunities to integrate health records and reports into their own conceptualizations and treatment of clients and subsequently do not put forth as much effort in doing so in their current practice.

### **Potential Implications**

Previous research supports collaborative and integrated healthcare delivery as efficacious and cost-effective beyond treatment as usual. This study provides evidence that psychologists in general tend to be in favor of collaboration with primary care, but tend not to engage in such

practices unless they have received training or have practiced in medical settings. These findings may have significant bearing on current professional and policy developments in clinical psychology as well as health care more broadly.

**Interprofessional education.** Should education and training in medical settings actually increase collaborative practice as this study's results suggest, than it would seem incumbent upon health profession training programs to emphasize interprofessional collaborative approaches. And indeed, in the wake of building empirical evidence showing the effectiveness of interprofessional, collaborative, and team-based healthcare, various leaders in healthcare education have begun to make significant efforts to restructure their training models to reflect this approach. In 2010 an expert panel of representatives from U.S. medical, dental, nursing, public health and pharmacy education (Interprofessional Education Collaborative Expert Panel, 2011) gathered to "identify a common set of competencies that would advance substantive interprofessional learning experiences and help prepare future clinicians for team-based care" (p. 6). Coalescing research and theory and applying it to the training of pre-licensure/precredentialing students, this panel developed competency recommendations in the domains of value/ethics, roles/responsibilities, inter professional communication, and teams and teamwork to guide the efforts of educators attempting to provide interprofessional education to their healthcare profession students.

In a more recent example of the implementation of interprofessional education Garfunkel, Pisani, leRoux, Phil, and Siegel (2011) reported on the outcome of study of a pediatric residency training program that included BHPs involved in integrated care in one of their two continuity clinics. When following up with these residents up to 10 years post-graduation, those in the integrated clinic were more likely to report feeling prepared to collaborate as well as actually

engaging in consultation, joint treatment, and collaborative care with BHPs. The results of Garfunkel, et al's research appears very consistent with this study's findings, providing further strength to the argument that professional psychology and other healthcare training programs with the goal of preparing their students for effective practice should provide training experiences in settings with providers from multiple professions.

**Organizational and financial support for collaboration and integration.** As mentioned in the above review of literature, significant financial and organizational barriers have long worked against integrative models of care, particularly as it relates behavioral and medical care. But as the data showing the cost-effectiveness of integrated and collaborative care mounts it becomes more and more difficult for third-party payers and health systems to continue with business as usual. In addition, this study and others also appear to demonstrate provider willingness and engagement, with the requisite training and experience, in collaborative care when given the opportunity. Therefore, few, if any, significant reasons appear to remain for the failure of large scale implementation of integrated models or supports for great interprofessional collaboration--except, perhaps, political gridlock.

Recent U.S. federal and state policy developments reflecting an understanding of the established effectiveness of integrated and collaborative appear to be on the horizon. The Patient Affordability and Accountable Care Act (ACA), the most recent health reform legislation, provides funding and support for large scale changes in Medicaid and Medicare services based on the models demonstrated to be effective (Druss & Mauer, 2010). As such, demonstration programs in integrated behavioral health have begun including medical home programs with integrated BHPs and colocation of PCPs in community mental health centers to provide care for patients with SMPI. The ACA also contains provisions for the formation of Accountable Care



Organizations (ACO), collections of hospitals, primary care providers, and specialists responsible for the care of particular groups of patients and recipients of bonuses when their patient population clinical outcomes improve. Health information technology (HIT) is also a target of ACA with an allotted \$38 billion to establish more effective means to establish, maintain, and transmit health information, including the development of universal and portable patient electronic health records.

Should these programs be demonstrated effective and feasible as well as implemented they will almost certainly improve patient outcomes in integrated medical homes. However, these efforts will also likely address some of the potential remaining barriers for psychologist collaboration as it relates to non-located providers accessing their clients' health records and facilitating the collaborative interprofessional care of those clients who struggle to maintain continuous primary care.

**End of the “theory wars”.** Despite Pomerantz and colleagues (2009) identification of theoretical orientation as an important factor in the engagement of psychologists in integrated care, this study did not show any effects of theoretical orientation on attitudes or practices. Which begs the question what is all the fuss over the various established psychological theories about. Some argue that there is little to fight over; about 15%, in fact. Reviewing the data on the variables of various psychotherapeutic outcome studies Lambert and Barley (2001) identified techniques specific to particular theoretical orientations or treatment models to account for only about 15% of progress. Whereas extra-therapeutic change (client life events unrelated to therapy) accounted for 40% and factors common across most therapeutic approaches accounted for 30%. This well known Lambert and Barley's research points to the limited consequences of theory differences. The findings of this study indicates that theory differences may also have little if

any affect on overall perspective of psychology's role in healthcare. Will the long-standing "theory wars" finally come to an end? This particular research provides another voice for theoretical peace.

## **Contributions**

Results of this study, although admittedly of an exploratory nature, seem to offer unique contributions to the study of integrated care implementation. First, this research effort surveyed providers from all four major regions of the U.S., practicing in a wide range of setting types, and receiving various training experiences. Pre-existing research in the area of provider attitudes and practice related to collaborative or integrated care generally studied providers from a single clinic or organization of clinics in a particular geographical region (Garfunkel, et al., 2011; Yuen, et al., 1999; Grenier, et al., 2008, Gavin, et al., 1998; Kainz, 2002; Westheimer, et al., 2008). The diversity of settings, organizations, and geographical locations in this study may have controlled for potential biases of environmental factors present in these other studies. Second, this is the only known research examining the perspectives and practices of psychologists specifically in collaborating with primary care. The research found surveying behavioral health providers did not separate the response data by provider type (psychologists, counselors, social workers, etc.; Gavin, et al., 1998) and the remaining research of provider factors in integrated or collaborative care looked only at those perspectives of PCPs. As psychologists appear to be in unique demand for the implementation of integrated behavioral care, research targeted at factors particular to them will likely prove valuable. Finally, this study included psychologists not involved in medical settings or large healthcare organizations, providing useful information for how to encourage those providers who do not choose to practice in integrated settings to still engage in collaborative interprofessional practice.

## **Limitations and Future Directions**

Several limitations of this study may hamper the interpretability and generalization of its findings. First, a smaller than expected response rate produced a sample size that prevented the detection of smaller effect sizes as well as the examination of multiple interactions and covariates. Factors such as age, years of experience, geographical region of practice, and type of non-medical setting may have proven significant covariables in this study's analyses providing a more nuanced understanding of psychologist's collaborative attitudes and practices. Gavin and colleagues (1998) found that BHPs with more years of professional experience demonstrated a greater tendency toward collaboration with PCPs. Confirming the results of Gavin, et al's analysis and studying the effects years of professional experience on the variables unique to this study may provide important findings. Future research in this area will likely benefit from a larger sample in order to examine these and other potential interaction effects.

Another limitation of this study was its use of non-validated measures of constructs yet to be established. In attempting to assess collaborative attitudes and practices of behavioral providers with primary care this researcher was required to construct measures rationally based on the limited research and theory available. Due to the still-forming nature of the constructs in this study several adjustments were made post-hoc to analyze the data in more meaningful ways (the operational definition of medical setting and the statistical nature of the education variables). Indeed, the majority the study's findings were uncovered by post-hoc analyses. As such, the results of this study must be considered preliminary and in need of confirmation by measures submitted to psychometric scrutiny and hypotheses constructed from empirically validated theory.

Common to research using self-selected participants recruited by postal or electronic mail is significant potential responder bias. Those who elect to commit 15 to 20 minutes completing a survey by a researcher who is not present and who is not known personally to the participant can reasonably be expected to have a personal investment of some kind in the apparent topic area of the survey. This study likely included participants with a particular opinion about or interest in the collaboration of psychologists with primary care or the role of psychology in the future of healthcare in the US. How this might have affected the study results is unclear; however, it is probable that the number of participants dispassionate about this area of research were few. Controlling for responder bias can be very difficult and will be a continuing concern for any researcher using survey methods.

Finally, future studies examining the collaboration of behavioral health and primary care providers will achieve more generalizable results by comparing various types of behavioral health providers on openness, preparedness, and engagement in collaborative practices. Although psychologists have been identified as among the most extensively trained behavioral health providers, there exists little evidence supporting their relative effectiveness beyond those of other behavioral health professions in delivering integrated or collaborative treatment in primary care. This study included only psychologists, whereas others have examined BHPs from various disciplines as one group. Analyzing outcomes on measures of collaboration and integration with BHP type as a variable will likely provide data directing the various behavioral health disciplines' engagement in these new models of healthcare.

### **Conclusion**

Research and policy support appear to be rapidly building in favor of increasingly collaborative and integrated healthcare models. However, a long history of rigid separation of the

various sectors of the US healthcare system, particular between mental health and primary care, represents the significant inertia experienced by the vanguard of these new approaches.

Psychologists have been accused of complicity in this historical segregation of health professionals due to stubborn perspectives of provider autonomy, theoretical orientation, and dualistic concepts. As a result they have been viewed as responsible for stunting continuity of care and not improving long-term clinical outcomes by third party payers systems. But the data collected in this study tell a different story. Generally expressing attitudes of openness and interest in collaboration with primary care, psychologists in this study acquitted themselves of such charges. Yet, in order translate these attitudes into action, interprofessional healthcare collaboration must become standard in educational models before it can be expected as standard in practice.

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## Appendix A

(front)

Lucas Eberhardt De Master  
Pacific University  
School of Professional Psychology  
190 SE 8th Ave.  
Hillsboro, OR 97123

(postage)

(name of recruitee)  
(address of recruitee)

(back)



Please consider contributing to important research in the area of collaboration between psychologists and primary care providers by completing an online questionnaire. You will find additional study information and survey at

[www.surveymonkey.com/primarycarepsychology](http://www.surveymonkey.com/primarycarepsychology)

Your participation in this study should only take 10-15 minutes and will help shape the understanding of psychology's role in healthcare.

Thank you!

**YOUR PARTICIPATION IS NEEDED!**

## Appendix B

Lucas Eberhardt De Master  
Pacific University  
School of Professional Psychology  
190 SE 8th Ave.  
Hillsboro, OR 97123

Greetings!

Please consider contributing to important research in the area of collaboration between mental and behavioral health providers and primary care providers by completing an online questionnaire. You will find additional study information and survey at

<http://www.surveymonkey.com/s/healthcarecollaboration>

Your participation in this study will only take 15 to 20 minutes and may help significantly shape the understanding of the role of mental and behavioral health in our broader health care systems.

Thank you!

## Appendix C

You are invited to participate in a research study on the attitudes of psychologists' regarding collaboration with primary care providers and primary care models. The project has been approved by the Pacific University IRB. You were invited to participate because you have been identified as a licensed mental and/or behavioral health provider practicing in the United States. This study will take place online. This study's findings will be used to inform health professionals with pursuits in graduate education in mental and behavioral health. Please read this form carefully and ask any questions you may have before agreeing to be in this study. You are welcome to keep a copy of this form for your records. Lucas Eberhardt De Master and Jennifer R. Antick, Ph.D. are conducting this study.

If you agree to participate in this study you will be asked to complete a questionnaire requiring information from you related to your training, past professional mental or behavioral health experience, current practice setting and procedures, and beliefs about collaboration with primary care. We are seeking 200 study participants to complete this questionnaire. The questionnaire will require approximately 10 minutes to complete and will be available to you after you have agreed to this informed consent. We recommend you complete the following survey in a private and quiet location on a private and internet-connected computer. Responses to questions are not recorded until you complete the survey; therefore, you may return to the survey to complete at a later time should you need to do so. Participation in this study is free of any cost other than the commitment of approximately 15-20 minutes to complete. It is possible that participation in this study may expose you to currently unforeseeable risks. Should you feel that you have experienced adverse effects, you are encouraged to seek help from supportive family, friends, colleagues, or appropriate professionals.

Participation in this survey is anonymous. Your responses will not be matched with personal identification information in any way and investigators or any other witnesses of received data will be unable to match responses with any particular participants. Your responses will be received and compiled in a secure and encrypted internet account without any information about the computer you use recorded by the study investigators. Due to the anonymous nature of the questionnaire and general security of the information collected, this is little risk of harm to you. However, although significant efforts will be made to maintain the privacy of your response, information transmitted via the internet cannot be guaranteed absolute security. Nevertheless, no identifying information will be required to complete the following survey. In addition, study responses will be compiled, stored, and analyzed in password protected software files accessible only by the investigators and faculty advisors. If you wish to be notified of the study results you may select to be directed to a separate webpage where you may enter an email address where you would prefer the results to be sent. This email address will be stored in a separate location from study data and will not be linked in any way to your survey responses.

Some questions in the study questionnaire ask you to identify your beliefs regarding appropriate or ethical clinical practice. Should you feel any discomfort or unacceptable risk as you participate in this study, you may discontinue at any time. If at anytime you experience an adverse response to the following survey's questions, you are encouraged to seek help from supportive family, friends, colleagues, or appropriate professionals. If you would like to notify

the study's investigators of an adverse event, please contact the advisor of this study, Dr. Jennifer R. Antick, at 503-352-2612. Additional concerns regarding the study may be addressed by contacting the Pacific University's Institutional Review Board, at (503) 352 – 2112.

The records of this study will be stored anonymously. If you request the results of the study you will be required to submit your e-mail/mailing address. Addresses will be kept separate from data collected so responses can remain anonymous. Data will be kept in a password protected computerized database and will be available to the investigators only. If the results of the study are submitted for publication or public presentation, any information that could make it possible to identify individual participants will be eliminated.

During your participation in this project it is important to understand that you are not a Pacific University clinic patient or client, nor will you be receiving complete health care as a result of your participation in this study. If you are injured during your participation in this study and it is not due to negligence by Pacific University, the researchers, or any organization associated with the research, you should not expect to receive compensation or medical care from Pacific University, the researchers, or any organization associated with the study. Your decision whether or not to participate will not affect your current or future relations with Pacific University. If you decide to participate, you are free to not answer any question or withdraw at any time without prejudice or negative consequences. If you choose to withdraw after beginning the study there will be no adverse consequence to you, as any gathered information will be anonymous and may not be included in data analysis.

The researcher(s) will be happy to answer any questions you may have at any time during the course of the study. If you are not satisfied with the answers you receive, please call Pacific University's Institutional Review Board, at (503) 352-1478 to discuss your questions or concerns further. If you become injured in some way and feel it is related to your participation in this study, please contact the investigators and/or the IRB office. All concerns and questions will be kept in confidence.

\*1. I am 18 years of age or older, I am a licensed behavioral or mental health provider, and I am currently practicing in a clinical role in the United States.

- Yes
- No

\*2. I have read and understand the description of my participation duties and have no further questions.

- Yes
- No

\*3. I agree to participate in this study and understand that I may withdraw at any time without consequence.

- Yes



-No

**4. How were you directed to this survey?**

- State professional association listserv
- Regional professional association listserv
- National professional association listserv
- Special interest association (divisions, sub-specialty, etc.) listserv
- Forwarded from colleague, friend, professional contact, etc.
- Other (please specify)

**5. What is your sex/gender?**

- Female
- Male
- Transgendered
- Other (please specify)

**6. What is your age?**

- 18 to 29
- 30 to 39
- 40 to 49
- 50 to 59
- 60 to 69
- 70+

**7. In what state do you currently practice?**

**8. In what U.S. state or country/region did you receive the majority of your training?**

**9. With what types of clients/patients do you primarily work? (check all that apply)**

- Adults
- Children
- Couples
- Families
- Cultural minorities
- Students
- Other (please specify)

**10. From what types of problems do your clients/patients suffer from?**

- Mild to moderate psychopathology
- Severe psychopathology
- Significant medical conditions

- Neuropsychological problems
- Learning disorders
- Relational Problems
- Other (please specify)

**11. How many years have you practiced in your current professional capacity?**

- 0 to 5
- 6 to 10
- 11 to 15
- 16 to 20
- 21 to 25
- 25+

**12. In what type of setting(s) do you currently work and/or practice? (check all that apply)**

- Private independent practice
- Private group practice
- Mental health agency
- Inpatient psychiatric
- Inpatient medical
- Primary care
- Outpatient specialty medical (e.g. bariatrics, dermatology, etc.)
- Substance Abuse Rehabilitation
- Physical Medicine Rehabilitation
- Educational (counseling and/or testing)
- Educational (faculty)
- Corrections/Forensic
- Other(please specify)

**13. In what settings have you worked and/or practiced for a total of at least 5 years? (check all that apply)**

- Private independent practice
- Private group practice
- Mental health agency
- Inpatient psychiatric
- Inpatient medical
- Outpatient specialty medical (e.g. bariatrics, dermatology, etc.)
- Primary care
- Substance Abuse Rehabilitation
- Physical Medicine Rehabilitation
- Educational (counseling and/or testing)
- Educational (faculty)
- Corrections/Forensic
- Other(please specify)

**14. What type of theoretical orientation guides your current practice? (Check all that apply)**

- Psychodynamic
- Humanistic/Existential
- Systems
- Cognitive-Behavioral
- Behavioral
- Integrative
- Mindfulness and Acceptance-Based
- Motivational Interviewing
- Solution-Focused
- Gestalt
- Other(please specify)

**15. What type of behavioral/mental health practitioner do you identify as?**

- Counselor
- Clinical/Counseling Psychologist
- Social Worker
- Mental Health Nurse
- Psychiatrist
- Behaviorist
- Other (please specify)

**16. What degree(s) do you hold?**

- MSW
- MA/MS
- Psy.D
- Ph.D
- Ed.D
- MD/DO
- RN
- CADC
- Other (please specify)

**17. Did your graduate coursework include curricula regarding clinical practice specific to medical settings?**

- Yes
- No

**18. What course material related to practicing in medical settings did you complete?**

- Health Psychology
- Chronic Pain
- Assessment of Medical Patients
- Brief Psychotherapies
- Neuropsychology
- Psychopharmacology
- Psycho-oncology
- Primary Care Psychology
- Behavioral Consultation in Medical Settings
- Other (please specify)

**19. What courses specifically related to practicing as a mental/behavioral health provider in medical settings did you complete in your graduate training?**

(constructed response)

**20. Did your clinical training involve working in a medical setting or with medical providers?**

- Yes
- No

**21. In what type of medical setting did you receive your training? (check all that apply)**

- Outpatient specialty medical clinic (e.g. bariatrics, dermatology, etc.)
- Primary care
- Inpatient rehabilitation
- Outpatient rehabilitation
- Inpatient medical
- Inpatient psychiatric
- Outpatient psychiatric/behavioral health
- Other(please specify)

**22. With what type of medical provider(s) did you train? (check all that apply)**

- Psychiatrist
- Neurologist
- Physiatrist/physiologist
- Anesthesiologist
- Family Practice
- Pediatrician
- Internal Medicine
- Obstetrics/Gynecology
- Nurse Practitioner
- Physician Assistant
- Other(please specify)

**23. During what stage of clinical training were you in a medical setting and/or with medical provider(s)? (check all that apply)**

- Undergraduate internship/shadowing
- Graduate clinical practicum
- Terminal Masters program internship
- Pre-doctoral internship
- Post-doctoral residency or fellowship
- Other (please specify)

**24. What proportion of your clients are referrals from primary care providers?**

- 0-4%
- 5 to 9 %
- 10 to 24%
- 25 to 49%
- 50 to 74%
- 75% to 100%

**25. What proportion of your clients do you encourage to seek or establish preventative/routine health care?**

- Rarely or never (leave it up to the client to decide if or when to see PCP)
- 5 to 24 %
- 25 to 49%
- 50 to 74%
- 75 to 100%

**26. For what proportion of your clients do you request and/or review their medical records?**

- 0 to 9 %
- 10 to 24%
- 25 to 49%
- 50 to 74%
- 75 to 100%

**27. What prompts you to obtain and/or review your clients' medical records? (check all that apply)**

- Client prescribed psychotropic or other psychoactive medication
- Client a poor historian/reporter of medication
- Rule out somatoform disorders
- Identify health conditions and treatments that might be causal/maintenance/exacerbating factors in mental/behavioral health

-Always request and review medical records of clients

**28. For client cases referred from primary care providers, which of the following actions do you regularly take (check all that apply)?**

- Review health records
- Confirm or clarify referral question with medical provider
- Send assessment/diagnostic information to medical provider
- Notify medical provider of client progress
- Provide medical provider with summary of treatment

**29. What degree of credibility do you believe most primary care providers place on the practice of clinical psychology as a health profession?**

- Great credibility
- Average credibility
- Some credibility
- Little credibility
- No credibility at all

**30. What importance do you believe most primary care providers place on psychosocial issues, in comparison to other health factors, when they assess their patients?**

- More importance
- Equal importance
- Somewhat less importance
- Little importance
- No importance at all

**31. What do you believe to be the minimum session length possible for a psychologist to provide an effective therapeutic intervention?**

- Less than 10 minutes
- 10 to 19 minutes
- 20 to 29 minutes
- 30 to 45 minutes
- 46 to 60 minutes

**32. What referral do you view as the most appropriate for a patient presenting in a primary care setting with comorbid chronic medical illness and mental illness (e.g. type I diabetes and major depression, recurrent, mild)?**

- Psychotherapist
- Health psychologist
- No referral (i.e. primary care evidenced-based management alone)
- Continue primary management by PCP with consultation by mental health provider
- Team treatment of PCP and mental health provider

**33. Choose the below option that best describes your belief regarding the degree of autonomy (versus collaboration) in diagnosis and treatment decisions appropriate in the practice of clinical psychology.**

- Licensed mental health providers should diagnosis and treat the clients to whom they provide services completely independently.
- Licensed mental health providers Psychologists should be generally free to diagnosis and treat the clients to whom they provide services but collaborate with the client's other health service providers when symptoms appear to be directly affected by medical conditions or when treatment is "stuck".
- Licensed mental health providers should try to get all available health records about the clients they diagnosis and treat if the client has a significant comorbid health condition.
- Licensed mental health providers should obtain health records AND collaborate with healthcare providers of their clients with significant comorbid health conditions.
- Licensed mental health providers should collaborate whenever possible with the health service providers in the diagnosis and treatment of all the clients they diagnosis and treat.

**34. How do you view the environment of most primary care clinics?**

- Noisy, crowded, and unsettling
- Unpleasant but usually tolerable
- Little feeling one way or another
- Generally comfortable but sometimes overly rushed
- Mostly pleasant and accommodating

**35. How amenable a setting for psychological assessment and care do you believe primary care clinics to be?**

- Very amenable and vital setting
- Adequately amenable setting
- Somewhat amenable setting
- Mostly not amenable and inadequate setting
- Completely inappropriate setting

**36. How effective do you believe the "medical model" of healthcare to be?**

- Very efficient and effective model of care
- Generally effective and appropriate in most cases
- Appropriate for most medical diagnosis and care but likely ineffective for behavioral conditions
- Often oversimplifies health and especially behavioral problems
- Almost always inappropriate and possibly unethical model of treatment for all conditions

**37. Note your level of agreement with the following statement: Mind and body influence medical disease and body perception.**

- Disagree
- Somewhat disagree
- Neither disagree or agree
- Somewhat agree
- Agree

Thank you for your participation in this study! If you are interested in receiving a summary of this study's results, please send an email requesting this to [dema6332@pacificu.edu](mailto:dema6332@pacificu.edu).